

HAZARD CONTROL PLAN AND WORK AUTHORIZATION

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This form is from MAQ-035

1. Describe the work to be performed (use continuation page if needed) or give procedure number, revision number, and title.

MAQ-HCP-NNInstrumentMaint, R4 Title: NEWNET Instrument and Station Maintenance.
This HCP covers the work performed to maintain, calibrate, repair, and store instruments and equipment for the NEWNET project.

2. Describe potential hazards associated with the work (use continuation page if needed).

1. Lightning.
2. Temperature.
3. Sun exposure.
4. Snakes, spiders, wasps, etc.
5. Slips, trips and falls associated with uneven, wet, and/or snow-covered surfaces.
6. Use of hand tools (screw drivers, wrenches, knives, pliers & wire cutters, etc.).
7. Use of hand power tools (drill motors, saber saw, Sawzall, soldering irons, etc.).
8. Heavy lifting of equipment, batteries, etc.
9. Compressed air from air compressor.
10. Battery hazards: acid burns from spilled battery gel, arcing from shorting.
11. Lowering of station towers: dropping booms can cause serious injury.
12. Use of spray paint to label equipment and supplies.

3. For each hazard, list the likelihood and severity, and the resulting initial risk level (before any work controls are applied, as determined according to LIR300-00-01, section 7.2)

1. Remote / catastrophic = low
2. Occasional / moderate = low
3. Frequent / negligible = low
4. Improbable / critical = low
5. Occasional / moderate = low
6. Occasional / negligible = minimal
7. Occasional / moderate = low
8. Occasional / critical = medium
9. Improbable / moderate = minimal
10. Improbable / moderate = minimal
11. Occasional / critical = medium
12. Improbable / moderate = minimal

Overall *initial* risk: ☐ Minimal ☐ Low ☒ Medium ☐ High

4. Applicable Laboratory, facility, or activity operational requirements directly related to the work:

☒ None ☐ List: Work Permits required? ☒ No ☐ List:

5. Describe how the hazards listed above will be mitigated (e.g., safety equipment, administrative controls, etc.):

1. The lightning threat must be continuously monitored by the worker. Developing cumulonimbus clouds in the area are a definite indicator that it is time to monitor the lightning threat more closely. If thunder is heard directly overhead, or if lightning is less than 5 miles away (count the seconds after flash), immediately stop work and move to a safe place (read MAQ's "Safety for All Employees").
2. Cold temperatures pose a greater threat to the worker. The worker must be aware of the possibility of hypothermia which is exacerbated by wind and wet weather. The worker must dress appropriately for the weather conditions and possible conditions. Since a vehicle is typically at hand, it is easy for the worker to seek shelter and an active heat source.

-- See continuation page. --

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6. Knowledge, skills, abilities, and training necessary to safely perform this work (check one or both):

☐

Group-level orientation (per MAQ-032) and training to applicable procedure.

☒

Other → Describe:

ESH-13 back care and lifting class.

7. Any wastes and/or residual materials? (check one) ☐ None ☒ List:

Used lead-acid and Ni-Cd batteries are recycled and thus not considered disposable waste. Empty spray cans (not RCRA waste but considered waste by LANL) and lithium cell batteries are disposed in designated sealable waste containers and are properly disposed of by group waste coordinators.

8. Considering the administrative and engineering controls to be used, the *residual* risk level (as determined according to LIR300-00-01, section 7.3.3) is (check one):☐

Minimal

☒

Low

☐

Medium (requires approval by Division Director)

9. Emergency actions to take in event of control failures or abnormal operation (check one):

☐

None

☒

List:

1. Contact the MAQ group office.

2. Arrange for appropriate transportation to the hospital or nearest Occupational Medicine Group medical station.

After this form is approved, perform the work safely. Identify opportunities for improvements in safety and report these to the safety officer or group leader.

Preparer(s) signature(s)

Name(s) (print)

/Position

Date

[NOTE: Training to a procedure constitutes authorization.] **If this work is NOT described by a procedure:** I have reviewed the safety of this proposed work with the group safety officer and I commit to follow safe practices when performing this work.

Employee signature

Name (print)

Date

Additional employee signature (optional)

Name (print)

Date

Additional employee signature (optional)

Name (print)

Date

Group leader or safety officer review.

I have reviewed the proposed work with 1) the preparer(s) and 2) employees who will perform the work (if not described in a procedure) and I believe the hazards and safety concerns have been adequately addressed. The work as described above is hereby authorized. This authorization expires one year after the date below.

Group leader or safety officer signature

Name (print)

Date

This plan will be revised according to MAQ-035. Group leader or safety officer: After completion, submit to MAQ Records Coordinator.

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Hazard Control Plan continuation page. Give item number being continued.

5. How hazards are mitigated:

3. This topic is covered in the MAQ "Safety for All Employees" required reading for all employees. Sun exposure can be minimized with proper clothing, such as long sleeves and a brimmed hat. It is also important to use a high number sun screen. The hazard of sun exposure is not just confined to summer.

4. This topic is covered in the MAQ "Safety for All Employees" required reading for all employees. The prospect of encounters with snakes and venomous insects requires the worker to be aware of his surroundings. Especially, watch where you step and where you place your hands.

5. Slips, trips and falls can occur anywhere and are of greater potential in the field environment. The worker must be aware of his surroundings and use commensurate caution.

6. Ensure that hand tools are in good condition and are proper for the application. Wear safety shoes and safety glasses when using the sledge to drive stakes.

7. As with hand tools, ensure that power tools are in good condition and are proper for the application. Wear safety glasses.

8. Use proper lifting techniques. Attend PS-13 class on back care and lifting.

9. The required nozzle ends have been installed (that can minimize injury if used improperly). When using compressed air to dust equipment, wear safety glasses. Never shoot the air at yourself or another person.

10. Always wear safety shoes when carrying the heavy batteries. Do not package batteries with any other materials. Individual batteries will be boxed in a secure manner so that the batteries do not shift or tip during transport. The gel electrolyte will not run but may still be a hazard if touched if the battery case is broken. Label each outer box "This Side Up" with an arrow indicating the top. The storage room contains an eyewash station, spill kits, and catch trays. The 300V "button cells" contain current-limiting devices. Disconnect all power when performing station maintenance. Be careful not to short the battery terminals against metal cases or with tools. Use plastic caps on the 12V batteries to prevent accidental shorts.

11. Tower lowering: two people are required to perform any lowering of station towers. Some stations have towers that pivot down relatively easily; others have towers that must be "walked" up and down. Use extreme caution and be aware of your footing and the tower's position at all times. Unless absolutely necessary when actually handling the tower, avoid standing directly under the tower when lowering and raising.

12. Spray painting: Wear safety glasses. Latex (or equivalent) gloves are recommended. Spray in a well-ventilated area only. Store paint cans in flammables storage cabinet. Dispose of empty cans as waste (in 90-d storage area, to be crushed by LANL waste).